UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,733	08/28/2000	Hiroaki Kawamichi	NIT-228	5717

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EXAMINER
ALI, SYED J

ART UNIT	PAPER NUMBER
2127	8

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. ●	Applicant(s)
	09/648,733	KAWAMICHI ET AL.
	Examiner	Art Unit
	Syed J Ali	2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
     closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-27* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
     application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is in response to the amendment filed March 31, 2004. Claims 16-27

are presented for examination.

2.   The text of those sections of Title 35, U.S. code not included in this office action can be

found in a prior office action.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4.   **Claims 16-20 and 24-25 are rejected under 35 U.S.C. 102(e) as being anticipated by**

Chu et al. (USPN 6,493,710) (hereinafter Chu).

5.   As per claim 16, Chu teaches the invention as claimed, including an attribute data

correction method in a distributed system having a plurality of elements each including a

computation device and a storage device, said attribute data correction method being performed

by at least one of said plurality of elements, said method comprising the steps of:

storing in said storage device in said one element, an attribute data indicating an attribute

of said one element (col. 3 lines 51-63);

receiving an attribute data of said one element, from at least another one of said plurality

of elements (col. 4 lines 59-67; col. 7 lines 48-59);

determining, by said computation device in said one element, a content of said attribute

data to be held by said one element based on the content of said attribute data received from said

another element (col. 7 lines 25-32; col. 7 lines 48-59);

correcting the content of said attribute data stored in said storage device to be coincident

with the determined content of said attribute data (col. 7 lines 48-59); and

notifying to said another element said determined content of said attribute data (col. 7

lines 48-59).

6.   As per claim 17, Chu teaches the invention as claimed, including an attribute data

correction method according to claim 16, wherein said correcting step includes a step of judging

the necessity of correction by comparing between said determined content of said attribute data

and said attribute data stored in said storage device (col. 7 lines 48-59).

7.   As per claim 18, Chu teaches the invention as claimed, including an attribute data

correction method according to claim 16, wherein said determining step determines said content

of said attribute data within a specific time period, based upon the attribute data received from

said another element (col. 7 line 60 - col. 8 line 6).

8.   As per claim 19, Chu teaches the invention as claimed, including an attribute data correction method according to claim 16, wherein said determining step determines said content of said attribute data, based upon the attribute data received from a specific number of said elements other than said one element (col. 3 lines 51-63; col. 4 lines 59-67).

9.   As per claim 20, Chu teaches the invention as claimed, including an attribute data correction method according to claim 16, wherein said notifying step of notifying to said another element notifies when all contents received from said another element are not the same (col. 9 lines 18-25).

10.   As per claim 24, Chu teaches the invention as claimed, including an attribute data correction method according to claim 16, wherein said data correction method is performed periodically (col. 7 line 60 - col. 8 line 6).

11.   As per claim 25, Chu teaches the invention as claimed, including an attribute data correction method according to claim 16, wherein said data correction method is performed at a predetermined time (col. 7 line 60 - col. 8 line 6).

Claim Rejections - 35 USC § 103

12.   **Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view of Nagai et al. (USPN 5,223,991) (hereinafter Nagai).**

13.   As per claim 21, Nagai teaches the invention as claimed, including the following

limitations not shown by Chu:

        an attribute data correction method according to claim 16, wherein said determining step

determines said content of said attribute data based upon the majority rule applied to a plurality

of contents received from a plurality of said elements other than the self element (col. 3 lines 49-

58).

14.   It would have been obvious to one of ordinary skill in the art to combine Chu with Nagai

since for resolving data discrepancies, it is imperative that the data is known to be reliable.

Especially in the case where there are multiple sources modifying data, as in Chu, there exists a

possibility that inconsistencies may exist in data, or ambiguity concerning which data set to use.

In particular, Chu teaches using timestamps to simply synchronize data with the most recently

modified data. However, as the number of data sets grows larger, the possibility for errors

increases. By feeding inputs to a majority circuit, such as the one disclosed by Nagai, the

changed data can be verified, such that if a majority of the data sources indicate a certain value,

computation errors will not lead to inconsistent data.

15.   **Claims 22 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over**

Chu in view of Nagai as applied- to claim 21 above, and further in view of Roth (USPN

5,907,839).

        As per claim 22, Roth teaches the invention as claimed, including the following

limitations not shown by the modified Chu:

an attribute data correction method according to claim 21, further comprising the step of

defining a significance level for each element at a time of updating, based upon a significance

parameter (col. 11 lines 34-55);

wherein said step of determining the content of said attribute data determines, based upon

a majority rule using said significance level (col. 11 lines 34-55).

16.   It would have been obvious to one of ordinary skill in the art to combine the modified

Chu with Roth since the weighted majority scheme disclosed by Roth has wide applicability in

terms of providing a way of testing the reliability of data. Specifically, although Roth is related

to a spell check algorithm, the algorithm can be used in other embodiments to provide a way of

verifying data. In relation to the modified Chu, the weighted majority scheme can be used to

verify data inconsistencies, by assigning a weight to each set of changed data, and determining

the statistical significance of varying sets of data. In that sense, a statistical anomaly would not

cause data discrepancies since the weighted majority algorithm would have a means of

eliminating data that is determined to be erroneous.

17.   As per claim 26, Roth teaches the invention as claimed, including an attribute data

correction method according to claim 22, wherein said significance level is defined based upon

the number of times of updating the stored attribute data and said significance level is used as a

weight of an attribute data applied in the majority rule (col. 11 lines 34-55).

18.   As per claim 27, Roth teaches the invention as claimed, including an attribute data

correction method according to claim 22, wherein said significance level is defined based upon

the updating event for the stored attribute data (col. 11 lines 34-55).

19.   **Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chu in view**

of Tamura (USPN 5,640,556).

As per claim 23, Tamura teaches the invention as claimed, including the following

limitations not shown by Chu:

an attribute data correction method according to claim 16, wherein said data correction

method is performed when any of said attribute data is accessed to be read (col. 1 lines 18-39).

20.   It would have been obvious to one of ordinary skill in the art to combine Chu with

Tamura since any time that data is accessed, there exists the potential that the data may be

changed. Although Chu performs synchronization in response to a change or modification of

data, updating every time that data is accessed further reduces chances for inconsistent data.

When data is shared among a plurality of elements, it is important that the shared data is up to

date. By synchronizing the data each time it is accessed, this can be achieved..

Response to Arguments

21.   Applicant's arguments with respect to claims 16-27 have been considered but are moot in

view of the new grounds of rejection.

Conclusion

22.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Immon et al. (USPN 6,240,416) teaches a distributed system for synchronizing and maintaining consistency of data.

Salas et al. (USPN 6,314,408) teaches synchronization of metadata for a product database.

23.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed J Ali whose telephone number is (703) 305-8106. The examiner can normally be reached on Mon-Fri 8-5:30, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Syed Ali
May 5, 2004

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